

## Soil and Water Remediation, Groundwater/Vadose Zone (RL-0030)

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### *Purolite Resin Treatment Skids at ZP-1*



*Technetium-99 (Tc99)  
skid at 299-W15-765*



*Tc99 skid at 299-W15-44*

## Overview

This section addresses Project Baseline Summary (PBS) RL-0030, *Soil and Water Remediation, Groundwater/Vadose Zone*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of April 2007.

## Notable Accomplishments

### • River Corridor

- Completed initial installation of the 300 foot NR-2 apatite barrier for Strontium-90 remediation.
- Completed 300 Area well that confirms trichlorethylene in deep soils.
- Continued efficient operation of K West pump and treat system for chromium.
- Initiated the 100-D Electrocoagulation Pilot Test for remediating chromium.
- Completed vertical profiles in seven 100-D chromium source investigation wells.
- Initiated laboratory studies to support injecting iron into In-situ Redox Manipulation (ISRM) barrier wells to remediate chromium.

### • Central Plateau

- Connected resin treatability skids to two 200 West wells to treat Technetium-99 (Tc-99).
- Initiated the 200 West active soil vapor extraction system for removing carbon tetrachloride.

### • Integration

- Developed integrated River Corridor/Groundwater/Waste Sites data quality objective (DQO) sequence to reach final cleanup decisions.
- Transmitted draft Hanford Integrated Groundwater and Vadose Zone Management Plan to the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA) for review.
- Completed Expert Panel on Electrical Resistivity Methods for detecting contamination in soils and received preliminary recommendations.
- Transmitted the RCRA Quarterly Report for October-December 2006, and the 1100-EM-1 Tri-Party Agreement (TPA) Change Notice to modify groundwater monitoring at 1100-EM-1.
- Initiated soil desiccation experiments to investigate fundamental thermodynamic and physical properties expected in the deep vadose zone soils.

## FY 2007 Funds vs. Spend Forecast (\$M)

	Projected FY 2007 Funding	FY 2007 Fiscal Year Spend Forecast	Variance
Soil & Water Remediation, Groundwater/Vadose Zone	\$ 91.9	\$ 86.3	\$ 5.6

## Schedule/Cost Performance (\$M)

Soil & Water Remediation, Groundwater/Vadose Zone	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion (FY07/CTD)
Current Period (Month)	\$5.5	\$6.1	\$5.6	\$0.7	12.4%	\$0.6	9.0%	\$68.7
Cumulative-to-Date (FY 2004-Present)	\$171.1	\$166.7	\$170.9	-\$4.4	-2.6%	-\$4.2	-2.5%	\$269.8

Numbers are rounded to the nearest \$0.1M and include the Closure Services allocation.

### CTD Schedule Performance (-\$4.4M/-2.6%):

The schedule variance is being driven by three main contributors:

- Groundwater/Vadose Zone Integration
  - Competing priorities delaying finalization of strategy and subcontracts.
  - Initiation of the Technical Peer Review was delayed while discussions were held with RL and Ecology regarding the panel/workshop strategy.
  - Environmental Database is behind schedule primarily due to the effort to finalize subcontracting strategy (identifying scope, etc.) with Lockheed Martin Information Technology, Inc. (LMIT).
- 100-NR-2 OU
  - Injections delayed until late February; change in field implementation plan.
- 200-ZP-1 OU
  - Drilling delays due to mechanical problems with resultant delays in lab analysis; four months behind schedule on feasibility study due to risk modeling delays; proposed plan four months behind schedule.

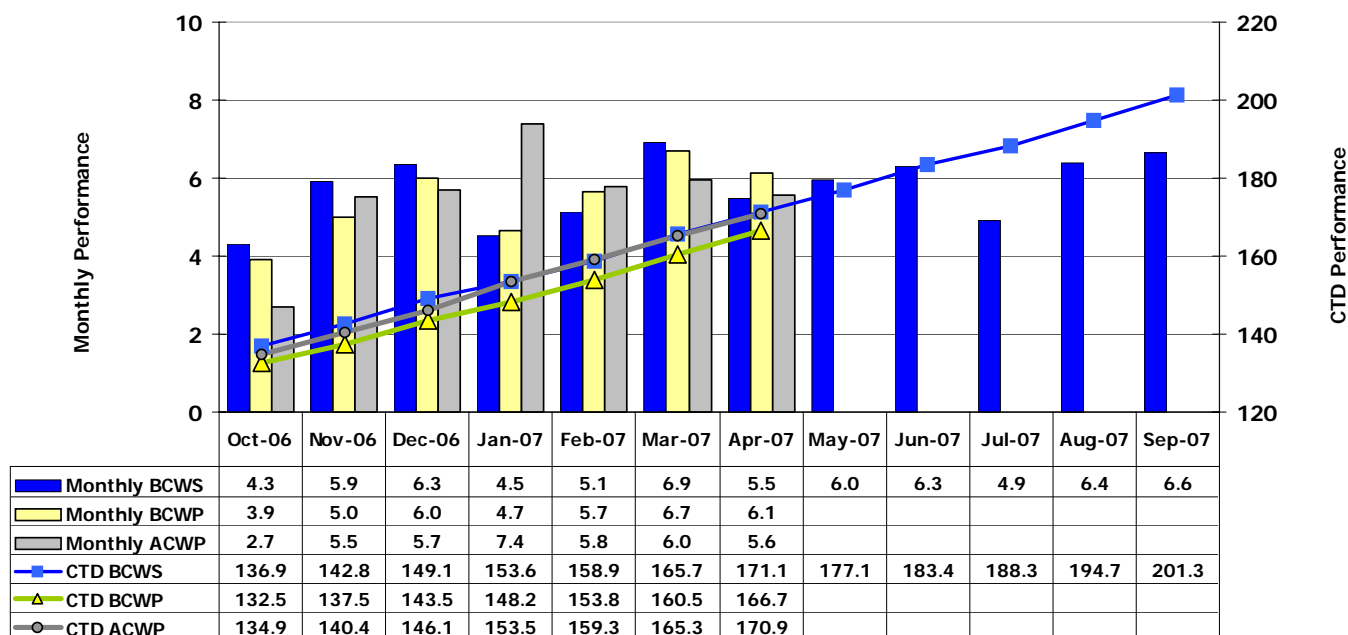
### CTD Cost Performance (-\$4.2M/-2.5%):

The cost variance is being driven by three main contributors:

- Well Management
  - Recovery costs for damaged 200-ZP-1 well and stuck well casing; higher than projected subcontractor costs for 100-KR-4 wells; advanced authorization to start 618-2 burial ground boreholes and A-4 monitoring well pending baseline change request (BCR) approval.
- Groundwater monitoring and Performance Assessments
  - Higher initial work load for decommissioning wells (Geo Science Logging); RCRA Monitoring and Reporting unbudgeted labor; higher costs than planned for Waste Sampling and Characterization Facility (WSCF)/Office of Sample Management.
- 100-KR-4
  - Overrun on the K West Reactor Chromium Plume construction; the tie-in to relocate injection wells (BCR being incorporated).

## Schedule/Cost Performance (\$M), continued

### Performance Analysis CTD and Monthly (\$M)



## Milestone Achievement

	Milestone Title	Type	Due Date	Actual Date	Forecast Date
<b>RL-30</b>					
M-013-06B	Submit the 200-BP-5 OU RI/FS Work Plan to EPA	TPA	3/31/2007	3/30/2007	3/31/2007
M-016-14A	Complete Construction of a 300 foot Permeable Reactive Barrier Utilizing Apatite Sequestration at 100-N	TPA	5/31/2007	3/25/2007	5/31/2007
M-015-48B	Submit the 200-ZP-1 OU Feasibility Study Report / Proposed Plan to EPA	TPA	9/30/2007		9/30/2007
M-013-10A	Submit the 200-PO-1 OU Remedial Investigation/Feasibility Study to Ecology	TPA	9/30/2007		9/30/2007
M-024-57M	Install a Cumulative of 60 Wells	TPA	12/31/2007	4/6/2007	7/31/2007
M-015-50	Submit a Treatability Work Plan for Deep Vadose Zone Technetium and Uranium to Ecology and EPA	TPA	12/31/2007		12/31/2007